

<b>Notice of Allowability</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/602,246	QIU ET AL.	
	Examiner Ramnandan Singh	Art Unit 2646	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1.  This communication is responsive to Dec. 27, 2005.

2.  The allowed claim(s) is/are 1-29.

3.  Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)  All    b)  Some\*    c)  None    of the:

1.  Certified copies of the priority documents have been received.

2.  Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.

3.  Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.  
**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

4.  A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.

5.  CORRECTED DRAWINGS ( as "replacement sheets") must be submitted.

(a)  including changes required by the Notice of Draftsperson's Patent Drawing Review ( PTO-948) attached  
1)  hereto or 2)  to Paper No./Mail Date \_\_\_\_\_.

(b)  including changes required by the attached Examiner's Amendment / Comment or in the Office action of  
Paper No./Mail Date \_\_\_\_\_.

Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).

6.  DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

#### Attachment(s)

- 1.  Notice of References Cited (PTO-892)
- 2.  Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3.  Information Disclosure Statements (PTO-1449 or PTO/SB/08),  
Paper No./Mail Date \_\_\_\_\_
- 4.  Examiner's Comment Regarding Requirement for Deposit  
of Biological Material
- 5.  Notice of Informal Patent Application (PTO-152)
- 6.  Interview Summary (PTO-413),  
Paper No./Mail Date \_\_\_\_\_.
- 7.  Examiner's Amendment/Comment
- 8.  Examiner's Statement of Reasons for Allowance
- 9.  Other \_\_\_\_\_.

## DETAILED ACTION

1. This action is in response to applicant's response filed on Dec 27, 2005. **Claims 1-29** are pending in the present application.

## DRAWINGS

2. Applicant is required to submit formal drawings.

3. **EXAMINER'S AMENDMENT/COMMENT**

Applicant has agreed to the following amendment during his telephonic interview with the Examiner held on Feb. 27, 2006:

1) In the drawings,

- (i) change "Appendix A" ----Figure 7-----
- (ii) Change "Appendix B" ----Figure 8-----

2) In the specification,

- (i) Paragraph 0035, line # 9, change "Appendix A" ----Figure 7-----
- (ii) Paragraph 0035, line # 10, change "Appendix B" ----Figure 8-----
- (iii) Paragraph 0018, line # 3, after "invention." -----Figure 7 illustrates the effect frequency bin values have on distinguishing the presence or absence of a loading coil on a loop. Figure 8 illustrates the effect frequency bin values have on distinguishing the loop length.-----has been inserted.

3) In the claims:

- (i) Claim 1, line # 11, after “value” -----, wherein the characteristic of the local loop is the presence of a loading coil or a length of a local loop----has been inserted.
- (ii) Claim 11, line # 13, after “value” -----, wherein the characteristic of the local loop is the presence of a loading coil or a length of a local loop----has been inserted.
- (iii) Claim 18, line # 15, after “second” ---power spectral density---has been inserted.
- (iv) Claim 18, line # 15, after “value” -----, wherein the characteristic of the local loop is the presence of a loading coil or a length of a local loop----has been inserted.
- (v) Claim 26, line # 12, after “value” -----, wherein the characteristic of the local loop is the presence of a loading coil or a length of a local loop----has been inserted.
- (vi) Claim 28, line # 11, after “value” -----, wherein the characteristic of the local loop is the presence of a loading coil or a length of a local loop----has been inserted.

The Interview summary is enclosed.

**REASONS FOR ALLOWANCE**

4. The following is an examiner's statement of reasons for allowance: :

- (i) With the approval of the Applicant's Terminal Disclaimer filed on Dec. 27, 2005, the rejection of claims 18-25 and 28-29 under the double-patenting is withdrawn.
- (ii) The applicants' arguments are persuasive. The amendments to the

claims overcome the prior art of records, and no other prior art was found to overcome the amended claims.

5. The claims have been re-numbered as follows:

CLAIMS NUMBER (ORIGINAL)	CLAIMS NUMBER (FINAL)
1-3	1-3
7-8	4-5
4-5	6-7
6	8
9-29	9-29

Claim no. 1 along with figure number 3 will be published in the Official Gazette.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

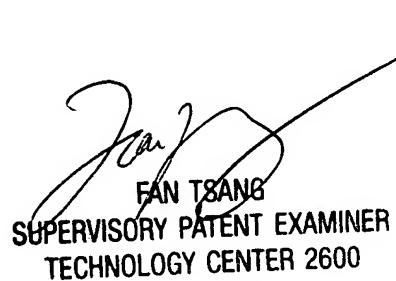
### ***Conclusion***

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ramnandan Singh whose telephone number is (571) 272-7529. The examiner can normally be reached on M-TH (8:00-5:30).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Fan Tsang can be reached on (571) 272-7547. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Ramnandan Singh  
Examiner  
Art Unit 2646



FAN TSANG  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 2600